International Seminar to Commemorate 75th Year of Gandhi Smarak Nidhi

Session 4: Gandhian Values and the Revolutionary Power of Technology: Is A Synthesis Possible?

August 25, 2024, 10am, Gandhi Bhavana Bengaluru

Session Transcript

[Dr. Wooday Krishna] I would like to give a special welcome to all of you who have come to this International Discussion Conference. As the 27th President of Gandhi Smarak Nidhi, I would like to extend my greetings to all the people who have come to this Discussion Conference. As the 27th President of Gandhi Smarak Nidhi,. I would like to begin today's Discussion Conference.

[Omshivaprakash HL, Chairman] Good morning everybody. Welcome to International Seminar to commemorate 75th year of Gandhi Smarak Nidhi. I welcome each one of you here for the sessions for Day 2. We are starting this day with a very interesting session on Gandhian Values and the Revolutionary Power of Technology. Is a synthesis possible? It's a question that we need to ask.

Today we have with us some prominent speakers who are capable of answering this question. And helping us enlighten ourselves about Gandhian Values and the Revolutionary Power of Technology. Today we have with us Mr. Sudheendra Kulkarni, columnist and author of The Music of the Spinning Wheel. We also have an online presence of Mr. Sam Pitroda, internationally respected telecom inventor, information and communication technologist. I request all the speakers to come on stage.

We also have Mr. Carl Malamud, technologist and advocate of public domain, public.resource.org. He is also the co-founder of Servants of Knowledge initiative, which we are digitizing various books here in Gandhi Bhavan.

We also have Mr. Kollegala Sharma, senior science communicator and former chief scientist in CSRI. He is also the co-founder of Central Food Technology Research Institute, Mysore.

Gandhi Values and Revolutionary Power of Technology. Is a synthesis possible? What is the power of technology? So, in this 21st century, we have to ask this question. The purpose of this session is to expose about the importance of Mahatma Gandhi in these 21st century. Thanks to all those present on stage.

Firstly, I would like to invite Mr. Sudheendra Kulkarni, columnist and author of Spinning Wheel. Sudheendra Kulkarni is a prominent Indian political activist, writer and public intellectual known for his deep commitment to secularism and Gandhian principles. A former aide to Prime Minister Atal Bihari Vajpayee, Mr. Kulkarni has been an influential voice in Indian politics, advocating for inclusive governance and interfaith harmony. He played a key role in policy formulation and communication strategies during his tenure in the Prime Minister's office.

He is a strong proponent of dialogue between India and Pakistan, often championing the cause of peace and reconciliation between the two nations. An author of several books and a regular columnist, one of his well-known books is Music of Spinning Wheel, Mahatma Gandhi's Manifesto for the Internet Age. This is a book about the Internet age. This book reflects on how Gandhi's principles can be applied in the contemporary digital world, advocating a synthesis of traditional value with modern technology to create a more equitable and just society.

I request Mr. Sudheendra Kulkarni to give a speech.

[Mr. Vishukumar]
Thank you very much, sir. Our seminar was a grand success yesterday because of all your cooperation and wishes. Thank you. I just had to mention a special note about this seminar. Our great Sudheendra Kulkarni is a son of Karnataka. He is the native of Belgaum.

He is the main person for our whole seminar concept and he has brought a lot of international speakers, especially Ban Ki-moon. He was a former Secretary General and it is very difficult to get him because of Sudheendra Kulkarni. He is a contemporary Islamic literature leader. Sudheendra Kulkarni has introduced Akbar Ahmad to us and he has given a very good speech. And one Dr. Quanyu Shang from China, she is also a friend of Sudheendra Kulkarni. She could make his recorded speech for us. And like that, Sam Pitroda and Felix Machado, these are all their good friends. Because of his connection, international connection, this seminar was this standard.

I personally congratulate and my sincere thanks from all Karnataka Gandhi's Mother Community and all our Gandhi fraternity. Thank you, sir.

[Sudheendra Kulkarni] Thank you.

And thanks friends to the organizers of this seminar, Dr. Wooday Krishna ji, Mr. Vishukumar ji and others for inviting me to participate in this. As we all know, the overall theme of this seminar is Mahatma Gandhi for the 21st century. The values that Gandhiji stood for actually go well beyond the 21st century. That is timeless. Yesterday, Chief Minister Siddaramaiah said, Gandhiji's birth in the 19th century, they lived in this world for 20th century, but Gandhiji's thoughts, his personal life.

Truth, non-violence, universal brotherhood, universal justice, mutual cooperation, mutual compassion and love. These are as old as human species. But Gandhiji himself has written that truth and non-violence, satya and ahimsa, are as old as hills. They are timeless. And these will last as long as the human species lasts and perhaps beyond. Because ours is not the last species in the evolution of life.

We should not be under the illusion that today's human beings—this is the pinnacle, the last point of evolution of human species. There is something far better, far superior that's going to succeed us. And even then, Gandhiji's values will be relevant and they will continue to guide the next species that will follow human species.

The theme of this session, friends, is Gandhian values and the revolutionary power of technology. Is a consensus possible? Now, this discussion is being held in Bengaluru. Bengaluru is an ancient place of science and tantric science. But this discussion is even more current.

My thoughts on this subject are based on my book, which was mentioned in the introduction, Music of the Spinning Wheel, Mahatma Gandhi's Manifesto for the Infinite Age. I should explain briefly why I wrote this book.

There is a widespread misconception that Gandhiji was opposed to science, technology, industrialization and modernity in general. This perception of Gandhiji, stems largely from the fact that his personality and his philosophy are associated with the spinning wheel. If we think of Gandhiji, the first image that comes to our mind is his charkha. Now, my own friend, Sanjeev, he is also working on the same principle. For those who have seen this, Gandhiji, who worked on the charkha, in today's modern medical science and tantric science era, how can Gandhiji be relevant in today's age of science and technology? This is the question that several people ask.

We all know what Winston Churchill, the arrogant leader of the empire, said about Gandhiji. He called him a half-naked fakir. Ardha Nagna Fakir. What he meant was, how can this half-naked fakir, belonging to the middle ages, claim to be leading the independence movement of a nation, which the British regarded as the crown of their empire?

Friends, being a student of technology myself, a serious question comes to my mind. How can a man, howsoever great in his own time, be relevant in our technological age, if he was opposed to modern science and technology? Our age, as we all know, is uniquely defined by the mighty advances in science and technology. And if Gandhiji was indeed opposed to modern science and technology, it means that in some crucial ways, he belongs to the past, and not to the present, and much less to the future of humanity.

In other words, in this age of the Internet, in the age of revolutionary advances in artificial intelligence, Gandhiji with his spinning wheel, Gandhiji who advocated revival of village industries, is certainly anachronistic, indisputably outdated. But is this really true? How can Gandhiji be relevant to our age as an apostle of peace, non-violence and religious harmony, and yet be irrelevant on the parameter of science and technology which distinguishes our age from all the previous eras in human history?

This is the question that confronted me. The more I studied this subject, the more I got convinced that Gandhiji was far from being an opponent of science, technology and modernity. Indeed, my second discovery in my study of Gandhiji led me to another interesting, even amazing understanding that the philosophy of the spinning wheel has something close to the revolutionary power of the Internet. You might wonder, what kinship can there possibly be between the modest spinning wheel which occupies the primitive end of the technological spectrum and the Internet which occupies the most advanced technological offering of the human mind?

So before I proceed further with my talk, friends, I would like to show you a short film that encapsulates the main theme of my book. It's only six minutes. May I request our friends there to show it to us, and if possible, kindly dim the lights.

[Video plays, consisting of images, music, and captions, but very little speech.]

> A just, peaceful and beautiful NEW WORLD is being born …
> A world that Mahatma Gandhi had envisioned …
> A vision that will be realised by the INTERNET,
> an avatar of the Spinning Wheel.

‘For my material needs, my Village is my World
For my spiritual needs, the World is my Village.’ - Mahatma Gandhi

Music of the Spinning Wheel: Mahatma Gandhi’s Manifesto for the INTERNET AGE.
Sudheendra Kulkarni

Dedicated to … Shri Atal Bihari Vajpayee

My five principle endeavors in this book …

1. To remove the widespread misconception that Gandhiji was opposed to Science, Technology, and Modernity.
2. To revive the ‘Khadi’ spirit in the Internet Age by understanding the relevance of Satyagraha, Swaraj, and Swadeshi.
3. To decode the meaning of ‘Music of the Spinning Wheel, a mystical phrase in the Mahatma’s writing connoting the quest of his technological tool for MAN-WARD LOVE and GOD-WARD COMMUNION.
4. To posit the Internet as an avatar of the Spinning Wheel, provided the evolution of the Digital Era is guided by mankind’s ancient wisdom to minimise its perils and maximise its promises.
5. A call for all of us to become ‘INTERNET SATYAGRAHIS.’

PART ONE: Pathways to Satyagraha

Where he sat became a temple …
‘I am not the Servant of India. I am the Servant of Truth.’ - Mahatma Gandhi
SATYAGRAHA: A Unified Theory of Truth Linking Science, Religion and Social Change.

PART TWO: Romance with Science

Was Gandhiji Opposed to Science and Technology? A CARICATURE!
A ‘Thought Revolution’; Technology for a New Civilisation
‘Everything can be converted into Science or Romance.’ - Mahatma Gandhi
Champion of Nature Cure and Healthcare Research
A MAHATMA who was also a Cobbler, Weaver, Scavenger, Carpenter, Cook, Farmer, Teacher, and Nurse …

A Sanitary Scientist’s Unfilled Dream of ‘Toilets for All.’

PART THREE: Harmony Seeker

Decoding the Meaning of ‘Music of the Spinning Wheel.’
When the Music of the Spinning wheel mingled with the Music of Beethoven.

‘Truth is God’ and God is Joy’: An illuminating dialogue between Romain Rolland and Gandhiji.

‘A true artist whose mission was to make Gods out of Men of Clay’ - Nandlal Bose

PART FOUR: Beacon for the Present and Future

Nonviolent Economic Growth: Need to Align Money with Morality, Justice and Peace.
Gandhiji and Evolutionary Biology: From Man the Brute to Man the God.

Nuclear Weapons: Eliminate all Weapons of Mass Destruction NOW!
SURVIVAL OF THE KINDEST: Women and the Science of Nonviolence.
A Pioneer of the Green Movement.

The greatness of a nation and its moral progress can be judged by the way in which its animals are treated. - Mahatma Gandhi

Gandhiji's Brahmacharya: Divinising Sexual Energy for Nonviolence.

PART FIVE: Gandhiji as a Visionary of the Internet Age.

How Internet is serving the 'Khadi Spirit; in the 21st century.

Richard Feynman; Eric Drexler; Dr. Harold Kroto
Nanotech Revolution: Small will not only be Beautiful but also Bountiful.

Village and the Global Village: How the Internet Harmonises Globalisation with Swadeshi.

Internet for Peace
INTERNET
A Weapon of Mass Construction
How the Web is Promoting World Peace

How Gandhiji awaited the arrival of a Universally Useful Machine

1869 - Birth of Mahatma Gandhi
1969 - Birth of the Internet
How and Why the Net was Born

Norbert Wiener; Alan Turing; Vannever Bush; J.C.R. Licklider; Doug Engelbart; Tim Berners-Lee
'Gandhian' pioneers of the Internet

Be the change you wish to see in the world — Mohandas K. Gandhi
Think Different — Apple

WWW
"We are constantly being astonished at the amazing discoveries in the field of violence … But I maintain that far more undreamt of and seemingly impossible discoveries will be made in the field of Nonviolence." - Mahatma Gandhi

Where the Internet is - and ought to be headed.

What Einstein saw in the Mahatma.

Epilogue - It's Time We All Become INTERMET SATYAGRAHIS

> Young Indian thinkers (should) finally get over their morbid colonial fascination for Marx and Mao. - Anthony J. Parel, Renowed Gandhian scholar.
>
> Mahatma Gandhi is a prophet for the age of Communication Revolution. His wisdom can help us reap the promise of the future while avoiding the peril. - Ray Kurzweil, Renowned inventor and technofuturist.
>
> Gandhiji's influence has spread far and wide throughout the world, giving us a hope for a better future for our children. - Dr. Harold Kroto, Nobel laureate nanotechnologist.
>
> Film created by Riddhi Jaydeo Chokhawala and colleagues at Observer Research Foundation Mumbai

[Sudheendra Kulkarni] Life from a deeply spiritual science perspective. Both spiritual perspective and science perspective. He was a saintly man, but he had deep faith in the power of science, technology, and machinery. .Where he differed from others was the revolutionary power of modern science, modern machinery, modern technology. It should be used not for violence, not for waging war, not for exploitation of the weak by the strong, or of weak countries by strong countries. Not for promoting greed and unnecessary wants, and not for colonisation and exploitation of other creatures.

Rather, Gandhiji believed that science and technology should be used to fulfill the basic needs of all human beings in the earth. They should be used to eradicate poverty, hunger, and disease. And, they should be used to reduce human tragedy. They should be used to spread knowledge. Knowledge of both the external world, and of the internal world of the human heart, mind, and soul.

Indeed, Gandhiji had a romantic attachment to all those discoveries and inventions of science and technology which had the potential to serve humanity.

You might have noticed a very interesting line in the film where he says—where Gandhiji says—that everything in life can be converted into science and romance. Science and romance. The use of the word romance here is deliberate.

For Gandhiji, romance meant love of humanity. Love of anything and everything that brought happiness to humanity. In a sense, Gandhiji was a romantic and spiritually guided scientist. He redefined the meaning of science and love to embrace love for everybody on earth. Not just human beings, but all living beings on earth. For him, God, truth, nonviolence, and love meant one and the same thing.

Gandhiji believed that everything in human life should be guided by the same truth, by the same set of ethical and harmony-creating principles be it politics, economics, relations between nations and religious communities, and also relations between man and nature.

In practical terms, service of truth and nonviolence meant first and foremost service of the poor and the needy, care and compassion, and cooperation. You know, he encapsulated this value, this idea in just two words: sarvodaya and antyodaya.

ಸರ್ವೋದಯ ಎಲ್ಲರ ಉದಯವಾಗಬೇಕು. ಆದರೆ ಮುಖ್ಯವಾಗಿ ಅಂತ್ಯೋದಯ - ಸಮಾಜದಲ್ಲಿ ಅಂತಿಮ ಸ್ಥಾನದಲ್ಲಿ ಯಾರಿದ್ದಾರೆ ಅವರ ಉದಯ ಮೊದಲಾಗಬೇಕು. ಇದಕ್ಕೆ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನದ ಉಪಯೋಗವಾಗಬೇಕು. ಇದು ಗಾಂಧೀಜಿಯವರ ವಿಚಾರ.

(Sarvodaya should be the dawn of all. But most importantly the end - the rise of those who are in the last place in the society should be first. Science and technology should be used for this. This is Gandhiji's idea.)

Gandhi conducted amazing scientific experiments took place in the communes or ashrams that he established. Two in South Africa where he spent 20 transformative years of his life between 1894 and 1915 and two later in India. His communes, his ashrams, were indeed R&D centers, centers for research and development where he researched into both matters of man's outer world and the mysteries of man's inner world.

I can say without any fear of being contradicted that Gandhiji is the only political leader in modern times who attached least importance to politics. Friends, you know he was the leader of our freedom movement, which was a political movement. But he attached the least importance to politics. He spent more time turning his spinning wheel and popularizing khadi, which he projected as a non-violent weapon against colonial exploitation. He spent more time nursing the sick. He spent more time conducting experiments in health and nature cure. He spent more time exhorting the Indian people to remove the scourge of untouchability. He was the great social reformer.

He spent more time conducting experiments in children's education. He spent more time championing the cause of women's empowerment since he believed that the law of the future evolution of the human species is not survival of the fittest. The law of the future evolution of human life is not survival of the fittest but survival of the kindest. It was his firm conviction that the womanly qualities of care, compassion, nurturing and motherly love alone would save mankind and take it to a higher level of evolution. In his own words I quote, "if non-violence is the law of our being the future is with women."

And Gandhiji spent more time preaching and practicing inter-religious harmony and ultimately he became a martyr to the dark forces which did not believe in inter-religious harmony. Friends there is also no other leader in modern history of mankind who philosophized about the importance of inter-religious harmony. He philosophically linked all these ideals decolonization of nations, end of exploitation, end to wars and violence, elimination of poverty, sustainable or green development, women's empowerment, development of science and technology, social reform, religious harmony and man's inner purification and transformation. He linked all these to one supreme ideal and that ideal is pursuit of truth and non-violence.

For Gandhiji, satyagraha was not only a non-violent method of struggle for India's independence. It was a call for establishing a new human civilization based on universal brotherhood, cooperation and the new ethics of life based on honesty, trust and truthfulness. Gandhiji wanted that the world should adopt such science and technology and machinery that would promote these old age old ethical values for creating a new human civilization. Friends, it is my belief that science and technology are shaping the world in such a way that the future of humanity will be more Gandhian than it is today. There are many people today who somehow lack confidence and faith in the power of science and technology.

I appeal to all Gandhians that we should have faith in the power of science and technology because this is the greatest course of transformation that mankind has discovered and invented. We are soon going to enter or perhaps we have already entered the era of artificial intelligence, and artificial intelligence is going to transform the world in ways that we cannot imagine.

I have with me a book. It is by Ray Kurzweil, whose quote you saw in the film and Ray Kurzweil is one of the world's foremost technological futurist. He says about Gandhiji that Gandhiji is a prophet for the age of communication revolution. This is someone who is today considered the foremost authority on artificial intelligence and Ray Kurzweil says that today we have entered an era when we merge with AI. Human bodies are going to merge with artificial intelligence.

In the coming decades, the intelligence, the non-biological intelligence, that is the intelligence of machines, will exceed the intelligence of the human brain, million times. And artificial intelligence, nanotechnology, are going to realize the ideals of Gandhiji.

Decentralization, conservation of material resources, care for nature, all these are going to become possible, provided we use the power of science and technology with wisdom, with Sadbudhdhi, with Sanmathi. that is why I tell one last statement. And this is especially addressed to our dear children here, because they are going to enter a world full of possibilities.

As Gandhiji himself said, and this is truly a prophetic statement, Gandhiji has written, we are constantly being astonished by the amazing discoveries in the field of violence. We are constantly being astonished at the amazing discovery in the field of violence. But then he predicted, but I maintain that far more undreamt of and seemingly impossible discoveries will be made in the field of non-violence.

The future belongs to non-violence. The future belongs to love. The future belongs to compassion. The future belongs to non-cooperation.

So, let's leave such a wonderful new future, bright future, for our children, for children of India, for the children of the entire world. Thank you very much. Jai Hind, Jai Jagat.

[Omshivaprakash HL] Thank you, Sudhindra sir For explaining how Gandhi experimented with Charaka and science and how it is useful for our students In 21st century through the video and details of the book Music of the Spinning Wheel. Thank you very much, sir, for your valuable insights and the way you actually explained how Gandhi values can actually help our students and the next generation to take the message forward.

Now, we have a prerecorded video of Mr. Sam Pitroda, telecom inventor and information and communication technologist.

I will give a quick brief on his bio and then we'll have the video. Sam Pitroda is a globally recognized inventor entrepreneur and technology visionary who has made significant contributions to Indian telecom telecommunications and IT sectors. Often referred to as the father of Indian information technology revolution, Pitroda played a pivotal role in transforming India's telecommunication landscape in the 1980s and 1990s as the advisor to prime minister Rajiv Gandhi. Pitroda spearheaded the establishment of the Center of

Development of Telematics—C-DOT—and the creation of India's first indigenous digital switching systems.

His efforts significantly expanded rural telephony, bridging the communication gap of the in the country. He served as the chairman for National Knowledge Commission. The Knowledge Commission advised the Indian government on various issues related to education, innovation, and the application of technology to improve governance. In addition to his contributions to India, Pitroda has been active on the global stage, advocating for technology driven development and innovation. He continues to be a top leader in areas such as digital inclusion and sustainable development and democratization of information, of India telephones.

[Dr. Sam Pitroda] Friends, greetings from Chicago, it is indeed a special privilege and honor for me to be here with you to say a few words on Gandhi and technology. To me, Gandhi was a great role model, inspiration, especially at a time when I went to school. I was born in 1942 in British Raj.

In the boarding school I went to, it was totally Gandhian. I believe Gandhi is more relevant today than ever before in history. Of course, Gandhi means many things to many people. He was the father of a nation. He was a leader, Fakir. He was an idea, he was a concept, and he was a phenomenon. He was the decolonizer of the British Raj. He promoted nonviolence, but commanded no armies, had no government positions, and led the biggest independence movement in the history, which ultimately resulted in decolonizing the entire world.

He was a great communicator. To me, simplicity, sense of sacrifice, service to people, unconditional love for all. Truth and absolute truth. Single standard of conduct in public and private life really defined Gandhi in many ways. Gandhi was not against technology. But Gandhi was against technology that was misused, like everything else. Gandhi was for technology, benefiting people at the bottom of the economic pyramid. Technology that could not divide people, but unite people. Technology that could create opportunities for large number of people in rural areas.

I'm confident that Gandhiji would have been excited about Internet, social media. Because it is all about openess, accessibility. connectivity, networking, democratization, decentralization, and ultimately, social transformation and economic opportunities.

Gandhi believed in decentralization. Small is beautiful. Local talent. Local capabilities. Local needs. And, opportunity to create local jobs. Unfortunately, very few people really go into deeper understanding of Gandhi, and his ways and means to bring development to a large number of people.

I have studied Gandhi a little bit. I believe his thoughts and actions related to environment, Gandhi march, salt, and song like Vaishnava Jana To, his prayers, his charkha, his dhoti, all were symbols of communicating a great message. His life was his message, loud and clear.

When I started my work on telecom, I took inspiration from Gandhi. The digital technology must reach all the villages. This was in early 1980s when I met Mrs. Indira Gandhi and talked about transforming India through telecom and IT, which was quite a new concept in those days.

Mrs. Gandhi understood it, supported me. Then Rajiv Gandhi gave me political will. I wanted to implement, but the idea then was exactly opposite to Western concept. Western world wanted big switches, big manufacturing, increasing telephone density, and Gandhian thought said, it is all about connecting villages, smaller exchanges, rural communication, distributed architecture, indigenous talent.

Low cost, local manufacturing, local ancillary industries, and building human capacity. What we started then, when we had only 2 million telephones in India, has now mushroomed into a country of connected billion. We have 1.5 billion phones and we generate $200 billion worth of software service export every year, year after year.

It was possible only because we took Gandhian approach. If we had taken the Western approach of importing telephone exchanges, importing software for it, we wouldn't be where we are. Very few people understand the contribution of Gandhian thought in our approach to telecom development, IT development.

To me, Gandhi comes at three different levels. One, at a personal level, people level, which to me emphasize truth, trust, love, courage, and conviction.

Gandhi always talked about courage. Courage was the key to Gandhian activity on sacrifice, simplicity. Then at a planet level, Gandhi meant environment, needs of the people, bottom-up development, and dedicating your life to the service. At a platform level, Gandhi was a true believer in democracy, human rights, freedom, inclusion, diversity, non-violence, and Gandhi would have used social media very effectively to promote all of these.

It is unfortunate that few people are using social media to malign Gandhi with misinformation. I feel sorry for all of them. I wish they would take a little more time to understand the power of this Indian mind committed to larger public good. If world had followed Gandhi in 1940s while restructuring the global equation with World Bank, IMF, WTO, WHO, UN, and focused on Gandhian ideas,

I tell you, the world would be very different today. Gandhian ideas would have included decentralization, sustainability, non-violence. These are very powerful things. Gandhi was a man of technology. Gandhi was a man of ideas and innovations. And I am delighted that we are remembering Gandhi once again at this event.

We need millions and millions of people all over the world to think about this. We need people all over the world to think about Gandhi, promote Gandhi, and make Gandhi relevant today. In the day of technology, Gandhi is more relevant, especially in social media.

So I wish you all the best. I want to compliment you for taking this initiative. And thank you for giving me the opportunity.

[Omshivaprakash HL, Chairman] Man of technology, man of idea. Sam Pitroda gave a very interesting insight into how Gandhi would have loved the technology. At the same time, he also would have objected to how we are misusing the technology in this Internet era. He also spoke about decentralization. He also spoke about societal transformation.

From yesterday, we have been hearing how technology has been transforming ourselves, how Gandhian values can actually make a difference in our lives, and we are continuing this journey with our next speaker, Mr. Carl Malamud.

I'm very happy to have started the initiative of Servants of Knowledge, which is digitizing a lot of books here in Gandhi Bhavan. Carl Malamud is an American technologist, author, and public domain advocate known for his foundation, public.resource.org, headquartered in California. He's also a co-founder of Servants of Knowledge here in India. He's a pioneering advocate to open access to government information. He has dedicated his career to making public domain materials, particularly legal documents, and government publications, freely accessible to anyone. Malamud's efforts have included scanning and releasing vast amounts of government data, legal codes, and court rulings, challenging the barriers that restrict public access to this information. His work has been instrumental in promoting transparency and accountability in government, earning widespread recognition as a leader in the open access movement.

I welcome you, sir, for your speech.

[Carl Malamud] Thank you very much.

My friend Omshivaprakash, my friend and colleague and co-founder of the Servants of Knowledge, I wish to thank the Karnataka Gandhi Smaraka Nidhi, the Gandhi Smarak Nidhi New Delhi for inviting me. I especially want to thank Dr. Wooday Krishna, Mr. Vishukumar, Honorary Secretary Narendra for giving the Servants of Knowledge such a nice home here at the Gandhi Bhavan. It's been a real pleasure and an honor to partake of the activities.

My friend and colleague, Kollegala Sharma, science educator par excellence. Mr. Kulkarni, a public servant and Gandhian, and of course, our spinners for this wonderful technology demo. Thank you.

So Sam's comments were inspiring, but let me tell you a little back story that he didn't mention.

He said he asked to see Indira Gandhi. He wanted to put a telephone in every village. It was pretty presumptuous to ask to see the prime minister. He wasn't connected. He wasn't a politician or anything. And so the prime minister's office finally came back and said he could have 10 minutes. And Sam said, no, he needed a full hour. And the secretary was a little bit taken aback and went back to the prime minister's office of PMO and he said he'd check. And a month later they called and he said he could have the full hour. And that was real chutzpah, but that's Sam Petrova. I'm going to take no for an answer.

Sam talked about how the Internet was a decentralized architecture, was Gandhian. I want to expand on that to talk about how there were actually two Internets in the early days. And there are two Internets today.

I started working on computers in the late 1960s when I was a little boy. My father used to bring me to the laboratory to help him boot up the computers. In those days you had to flip switches before the computers would wake up and say hello. And by the late 1970s it was clear that something was happening with both communications and computers. They were converging. They were becoming the same thing. I dropped out of my Ph.D. program in economics to work for the computing center at Indiana University.

I went to Washington, D.C. and I helped change how computers were used at the Board of Governors of the Federal Reserve, our central bank. And in the 1980s I wrote a series of books about computer networks.

By about 1985, those of us in the field knew there was going to be a global Internet. We had no idea how big it was going to be, and we were all shocked and amazed at how big it ended up being today. But back then, only those of us working in the field had the hubris to believe this was actually happening. But it was happening.

In those days, all communications was the province of centralized telecommunications companies. We called them telcos. In the U.S., it was AT&T, and then it was broken up into a series of regional telcos. But it was still, you had one choice. And in India, it was ITI, Indian Telephone Industries. Those big companies and big government thought they were going to build the Internet. It was what I would call the Raj Internet. Or perhaps an East India Company Internet, or perhaps a bit of both.

But it wasn't your Internet.

The telcos owned all the equipment. They told you what you could connect to the telephone. It was totally top-down, totally centralized. And this was the case all over the world. The telcos banded together with governments like the European Commission and the U.S. Department of Defense. They dreamed up an Internet they called the Open Systems Interconnection, or OSI. It was coordinated by the International Standards Organization. Everybody spent billions of dollars on the Raj Internet. Tens of thousands of people worked on it.

In their vision, the telcos would operate the entire Internet and they tell you exactly what you could do it was a black box they'd have a menu of services you could purchase like text messaging or email and you paid per message and per email all of them would cost money you bought your Internet a la carte and it was not cheap this was not an all-you-can-eat buffet they called this Raj Internet a so-called smart network by which they meant all the smarts were in the middle the telco was smart you were done to understand how the net worked you had to spend thousands and thousands of dollars to buy the standards and the net was encumbered by all sorts of patents there was another Internet bill.

Meanwhile a few hundred people all over the world working in research labs and universities and small companies a few for government, many of them like me self-employed consultants, were banding together in an informal group called the Internet Engineering Task Force. Our network was totally decentralized. To us the telcos were done their sports were all on the edges in the computers. All the telco was supposed to do was push bits from one place to another. No fancy services that you bought or anything like that. Our Internet was based on open source software and open protocols and no patents any computer could be a server. Anybody could invent a new service like my friend Tim Berners-Lee who created the World Wide Web.

This was a Gandhian Internet. Gandhi said the future of India was in the villages not the corporate and government centers like Mumbai and Delhi. We believed the future of the Internet was in the laptops and desktops and phones, not vested in the corporate towers of the telcos. Gokhale told Gandhi to go to the villages, we went to the desktops.

We weren't supposed to win. The Raj Internet was destined to be the one and only Internet but it's gone today. We won that war. The Internet is in fact a Gandhian net. The title of this session asks if a synthesis is possible between on the one hand Gandhian values, and on the other hand, the revolutionary power of technology. Many people assume on the one hand you have Gandhi and on the other hand you have technology and science, and I think this is totally wrong.

Gandhi always believed in the revolutionary power of technology the question was to what aims did you practice the revolution? Was it to enrich the rich, to enrich yourself, to cement the power of the central government? To enforce communal divides by this information to keep down the poor? He opposed that. Or, would technology be used to bring up the people to level the playing field, to work for all of us no matter what our means? He embraced that kind of technology.

For him technology was not a magic bullet the future was in the people it wasn't in some magic thing. It isn't AI or singularities that will save the world. It's people and how they use the technology that will make the difference now.

A perfect illustration of why characterizing Gandhi as anti-science is totally wrong comes from my friend Ram Guha who writes about Gandhi's views on medicine. Gandhi was originally against scientific medicine and only believed in natural cures and herbal medicines. That may have been true when he was younger but Gandhi was always open to learn and he learned about western medicine and by 1919 he believed enough that he asked for surgery to cure his piles, and was so impressed that he recommended it to anybody else who had that issue.

In 1921 Gandhi opened a medical college in Delhi, the Tibbia College. He paid tribute to the spirit of research that fires the modern scientists, but then he issued a stern warning. He said "My quarrel is not against that spirit. My complaint is against the direction that the spirit has taken. It has chiefly concerned itself with the exploration of laws and methods conducing to the merely material advancement of its clientele."

One of my favorite Gandhi stories is a few years later in 1925 in Kolkata. He was asked to lay the foundation for a new Ayurvedic university, the Ashtanga Ayurveda Vidyalaya. All the dignitaries present spoke about the bright future and the mission of this new enterprise, what a great occasion it was to be there.

And then it came Gandhi's turn to speak. He trashed the joint.

He criticized the whole enterprise. He started out talking about medicine in general, expressed his usual reticence about medicine, what a difficult patient he was. But then he focused specifically on Ayurvedic medicine. He called the Ayurvedic doctors arrogant. They lacked humility, they promised that they could cure all diseases. He said the industry was selling humbug medicines only to make money, that magazines were full of advertisements that catered to the basest passions of humanity only to make money. He said the advertisements were alluring and no doubt profitable, but were cutting deep into the vitals of the suffering humanity.

He totally trashed the joint. The committee asked him to withdraw his comments and he refused. He said what he believed and he was sticking with it. He believed in Ayurveda properly applied, but he didn't like how it was being applied now.

I take two lessons from this. The first of course was that if you invited Gandhi to speak you should be prepared for him to speak his mind and not assume he would sing your praises. He spoke truth spoke truth to power.

The other, of course, is that Gandhi I believe would have been a huge user of technology today and as Mr. Kulkarni and Sam Pitroda both said. If Gandhi, for example, were asked by Elon Musk, the richest man in the world, the owner of Twitter, to speak at Twitter, I think the same thing would happen. Gandhi would with a twinkle in his eyes say "of course I'd be happy to speak" and then he would totally trash the joint. I don't know what Gandhi would say, but I'll tell you what I would say about Twitter: it's a cesspool of misinformation; it's a haven for extremists; it is non transparent, biased and manipulated; it has become a sewer of social media; has the morals and dedication to public service of the East India Company.

We went from the Raj Internet where governments will control your Internet, we now have the East India Company Internet for Mark Zuckerberg at Meta and Elon Musk at Twitter. You are the product. You are there to make profits for their companies located in the West. You are there to be manipulated in elections, to be manipulated with misinformation and disinformation and bias. This is the Raj Internet. There is a Raj Internet, right, the Sarkaar. There is the East India Company Internet, the Bazaar. There is a third path, Samaaj, civil society. This is Rohini Nilekani's wonderful three-part explanation of the world.

In the Gandhian Internet, there's a world out there of open source and open protocol and open science and open access to knowledge. And the question is not technology or Gandhi, it's not a revolution. It is the path that Gandhi followed his whole life. And we simply follow in the footsteps of the Mahatma. If you're in the technology business, the question is not the magic bullets of technology, It's how will you use those magic bullets. Thank you very much.

[Omshivaprakash HL] Thank you for your speech on open knowledge, open access, open technology in the views of Mahatma Gandhiji. Now I would like to request Shri Kollegala Sharma to give his next speech. Shri Kollegala Sharma is a prominent senior science communicator and a popular science writer in Kannada. Many of us might know the Kutuhali and Janasuddi podcasts.

And I forgot to mention that that Carl also invented Internet radio. So today we are actually going to talk about podcasting, so he invented that on the Internet. Formally, Kollegala Sharma, formerly a chief scientist at CSIR, Central for Technology Research Institute, CFTRI in Mysore, has authored over 3,500 popular science articles and scripted 200 science radio dramas for All India Radio and Community Radios.

In the past 5 years, he has pioneered a science, a Karnataka science podcast, Janasuddi. He was a finalist for a journalist's Breaking Walls competition producing over 800 episodes with significant read via WhatsApp and community radios. As a trainer and a source person, he has contributed to science translation, writing and scripting of science plays. From 2001 to 2023, he has served as a state coordinator for Kutuhali, a science communication program and he currently edits the monthly Kannada science magazine Kutuhali.

He has been honoured with the best science communicator award by the vision group on science and technology government of Karnataka and the best writer award by the Karnataka science and technology academy award. Kutuhali magazine and Janasuddi are not only a source of knowledge for Karnataka, but also for many other countries through WhatsApp and Facebook.

In their speech, Gandhi said that in the 21st century, technology is being used in many ways.

[Kollegala Sharma]

Namaskara everyone. All the team of Gandhi Smaraka Nidhi, Sri Kulakarniji, Carl Malamud ji, dignitaries, friend Jayadev in the audience, please listen to my words and tell me if my talk is right or wrong.

Before coming here, I was very hesitant. Hesitant because I belong to a generation which I call as the Trishanku generation. Trishanku generation mainly because we never fought for independence. We never started building this nation. But we were very, very vocal in criticizing whatever was happening. And standing right next to people like Sudheendra Kulkarni or speaking after Carl Malamud or our technologist Sam Pitroda, it's very difficult. I remember, in 1983, when I started my career as a telephone operator, it was very difficult to connect Mysore to Kumbakonam. I spent five nights on those days to connect one call. Those were the times. It was later that the RAX came, what Sam Pitroda was mentioning.

The idea was, of course, to take technology and science to everyone in India. And this was because Pandit Jawaharlal Nehru believed that science and technology is the only tool that can provide solutions to the problems that India faced and the world faced. In fact Every scientist that I have come across who speaks about using science and technology for development usually quotes Pandit Jawaharlal Nehru. But what I wonder is that Nehru, a disciple of Gandhi, whom we were taught that Gandhi is a technology-averse person, or who didn't like the technology at that time could think of science and technology as the tool for the development of this nation!

Let us look back at that, I’m not going to talk about the Gandhian values and the science and technology in present world or in the future world. That has been discussed threadbare by previous speakers. What I will be talking about is as the third generation of this country, post-independence, have we used the science and technology to build that future India which Gandhi dreamt about?

Gandhi had specific dreams about India. In 1931 in Chatham House, when he gave a lecture, he outlined what the future India should be. And remember in 1931 we didn't have the kind of technologies that we have today. Neither in health, nor in irrigation, nor in agriculture. We just had, I think, the chemical fertilizers being used in Germany. And at that time, Gandhi had spoken about what kind of an India we need.

Three core principles that he spoke about were thisOne is that decentralized villages he wanted. The villages should be Gram Swaraj, as he worded it. Villages should be self-sufficient in everything that we do. And, of course, the image that he gave or a metaphor that he used was the charkha. I look at charkha, not as a tool, but as a metaphor, as an image of what we should be doing to the villages. He said, when he was discussing the role of science and technology, that we should, whatever we do in the future, consider the 80% of the people who live in villages and who need help from every others. And this was in 1931, when we were only 300 million population.

Today, we are 1,200 million population. And in spite of that, we still have those 80% people needing science and technology, or any help that they can get. So, we have not progressed much We still have a lot to do to make our villages independent, make our villages self-sufficient. And like Carl said, in this area of technology, decentralization is very important.

Whenever I go around Mysore, I see a picture of families on the roadside. These are blacksmiths, *kammara*. Although, they sell knives, *Katti, Kudugolu,* and other agricultural implements, made right on the roadside. There is a contrast in the enterprise. They come from villages to urban areas and they want to sell their wares here. Could they not have done it from their villages? Could we not provide technologies a means for them to do that from their houses? This is the first question.

The second question is, related to what , Sam Pitroda said, about wantaking ted to take technology to the rural areas. The roadside smithies use a solar panel.Solar electricity panels are fantastic technology, a future technology. But what do they use that for? They use that technology to power their mobile phones. Not for the core activity that they are doing. And this is what surprises me.

Could we not have provided a means, a technology, for them to do whatever they are good at? The smithy work. Could we not provide technology to run their furnace. A technology which is portable?.

And if that could have happened, Gandhi's vision of providing tools to this 80% population, that gives them jobs in their places and retains the character of Indian villages as it is, would have been realized.But that has not happened.

Similarly, the other vision that Gandhiji had was about education. And education is something that many of us discuss very frequently. Because it forms , I should say, the steps on which we can reach out to a higher level. And Gandhi said about education that we needed education for everyone. A school in every village, a headmaster in every village. We now have all those things.

But he also said that this education should not be costly. We have schools in every village, but not affordable education to everyone. So this is something that worries me. And this development, of privatization of education, is recent.

When I was young, people had started using Gandhi as a derogatory term, we had free education. But today, when I have to send my children to school, I have to pay high prices. And if you do a survey around the villages, almost 30 to 40% of their earnings are spent on children's education. And this is something that we need to be very cautious about. How can we use science and technology to provide education to all equally? And it's not difficult. I was discussing it with Carl.

We have open source technology. We have distributed networks which we can use. We have tried these methods during COVID epidemic, of using, online teaching. We only have to tweak a little bit more and Make ourselves comfortable with the technology. And use that to reach even those unreached.

That is something that I look forward to in the future. So that a person in a village, in a village. Mr Jayadev here is doing tremendous job in setting up a free school in Chamarajanagar. But that is only one pocket. Can we have similar exercises or similar systems throughout the country where everybody will have a good education? We need Jaidevs everywhere. Not just one place. Or we should do away with Jaidev. The system should take care of it.

So Can technology help? Technology can definitely help. For example, the solar lighting. SELCO an NGO, provided solar lighting to several villages, making electrification of villages easy..

My question is, we are able to provide this, but have we realized what Gandhi wanted?, Besides providing these tools, we should also make the people self-reliant in developing the tools, the products, and selling them. That we are not doing. So the technology over the past 30-40 years, as I have seen, has helped the urban areas to develop, has made the rural areas look towards the urban areas for everything, from toothbrush to even now the mats that we sleep on. . And we are also importing the problems of urban pollution to villages through this.

Can we not reverse this? If you go to Mysore, early morning, , 7 to 9 o'clock, you will see a huge traffic from outside Mysore into the city. And these are people coming to city, looking for a daily job. . They are wage earners. They come to the city, gather some place, - there are several such gathering places in Mysore- , and wait
for someone to give them a job for that day. That's one of the pictures that you get in the cities.

Can we not stop this traffic? The technology is there. There are several technologies that we have. Let's take e-commerce, for example. E-commerce could be leveraged very well to take the rural technology to the urban areas. There have been efforts for doing that. But the rural products also have to match the versatility of the urban large-scale products. Can that be the future technologies, that engineers and scientists should be looking at. Have we done something like this?

One example that comes to my mind is from CSIR-CFTRI, Mysore, did this long back. It developed small tools that could be used in rural areas or in different places for a distributed production. For example, machines to make Lijjat Pappad or the environmental-friendly leaf plates. These were small devices which were taken up by lakhs of people and were used across India. And this is what I think Gandhi had in his mind.

And even in Internet age, we can have such technologies that can go rural. Like there are call centers which are cheating people in some village areas, not in urban areas. But that is not what we want. We want call centers that provide information, education to the rural areas in their place, in their language, and what they need. That Gandhi is being discussed today, after 90 years of that talk ,means that he will be relevant always. His values will be relevant forever. But then how do we match those values by our actions? That's where I think we have to think, brood, introspect, and act.

Thank you very much.

[Omshivaprakash HL] Thank you very much sir for beautifully articulating how we should be adopting technology in this era. With the 1,200 million population, how decentralization can actually make an impact with respect to the need for technology, use of technology and how we can actually like continue to dream about Gram Swaraj.

So, there are 1,200 million people in India. Gandhi, when he was thinking about decentralization, he came up with this idea that, in order to achieve Gram Swaraj how we can take away our technology, Kollega Sharma gave us a very beautiful example. This is a small intro. From the beginning, all the things we have heard from the listeners, all the things we have heard, from what we have heard, these are Gram Swaraj. The proper use of technology, Swaraj, right?

So, Mukta Tantramsha (Free/Open Software), Mukta Gnana (Open Knowledge), we have been able to think a lot about these thoughts. I would like to thank all of you for these thoughts.

Sudheendra Kulkarni may have given Gandhi's opinion. Gandhi was spinning the wheel. He taught us how Gandhi was doing things on the Internet. After that, Sam Pitroda taught us how Gandhi was a great communicator. Also, he taught us how villages should be able to use technology to make a revolution. In that, he taught us how to use Gandhi's values and principles.

In Gandhi's words, Servants of Knowledge, Scanning is the new spinning, is our tagline. Through that, in today's situation, by using technology, Mukta Tantramsha (Free/Open Software) or Mukta Gnana (Open Knowledge), to make a revolution, they have been able to do a lot, and they have taught us a lot through their words.

As Kollegala Sharma said, in the future, the people of our country, they have taught us how to use technology to make a revolution. I would like to thank all of you, and also, to all of you who have supported Gandhi's Mark.

So now, I request, we will be presenting mementos for one of the guests here. I request, Sri Umesh Baligar, a member of Gandhi Samark Nidhi, to present the memento to Mr. Sudheendra Kulkarni,. Thank you, sir.

Now, I request, Dr. Sanjoy Singha, Secretary of Gandhi Samark Nidhi, Delhi, to present the memento to Mr. Carl Malamud.

Thank you, sir. Now, I request, Sri Senthil Kumar, Trustee, Tamil Nadu Gandhi Samark Nidhi, to present the memento to Mr. Kollega Sharma.

For all the viewers online, this event is being broadcasted live, on Book Brahma Facebook, as well as Gandhi Bhavan Facebook and YouTube channels, which is also being streamed on edina.com. Thank you sir. Thank you very much. Thank you, sir, for joining the session.

Now, we have a tea break for the next 15 minutes, and we will Come back here for the next session at 11.45. We'll have dialogue among religions for peace and harmony session.